

**What is claimed is:**

1. A coaxial connection assembly comprising:

a coaxial jack assembly with a conductive outer shell with a first end and a second opposite end, the first end defining a first coaxial jack including an insulator and a center conductor, the second end defining a second coaxial jack including an insulator and a center conductor, the center conductors of the first and second jacks electrically connected;

a non-conductive housing including a longitudinal opening, the jack assembly slidably received within the longitudinal opening with the first end of the jack assembly adjacent a first end of the housing and the second end of the jack assembly adjacent a second end of the housing;

the longitudinal opening of the housing and the jack assembly each including a longitudinal guide, the guides cooperating to prevent rotation of the jack assembly within the opening;

the longitudinal opening of the housing including a stop to longitudinally limit sliding of the jack assembly within the opening;

the housing including a mounting flange extending away from the longitudinal opening adjacent the first end of the housing, the mounting flange including an opening for receiving a fastener.

2. The coaxial connection assembly of claim 1, wherein the interlocking longitudinal guides define the stop.

3. The coaxial connection assembly of claim 1, wherein the housing includes an outer face opposite the mounting flange, the face including a longitudinally extending ridge and a longitudinally extending groove, the ridge and groove may be slidably received within a groove and ridge, respectively, of an identically configured housing to hold the two housing together.

4. The coaxial connection assembly of claim 3, wherein the ridge has a dovetail shape and the groove has a mating shape for slidably receiving the ridge.

5. A jack pair comprising:

first and second jack assemblies, each jack assembly including a first coaxial connector end and a second coaxial connector end, each of the connector ends adapted to receive and electrically mate with a coaxial connector;

first and second housings, each housing defining a longitudinal opening configured to position one of the jack assemblies within the opening with the first coaxial connector adjacent a first end of the housing and the second coaxial connector end adjacent a second end of the housing, the housings being identically configured;

the opening of each housing slidably receiving one of the jack assemblies through the first end;

the opening of each housing and the jack assembly within the opening each including a longitudinal guide, the guides cooperating to prevent rotation of the jack assembly;

the opening of each housing including a stop to longitudinally limit sliding of the jack assembly within the opening through the first end of the housing and prevent removal of the jack assembly through the second end of the housing;

each housing including an outer face including a longitudinal ridge and a longitudinal groove, the ridge and the groove of the first housing slidably received within the groove and ridge, respectively, of the second housing to releasably hold the outer faces of the first and second housings together;

each of the housings including a mounting flange opposite the outer face adjacent the first end of each housing, the mounting flange including an opening for receiving a fastener.

6. The jack pair of claim 5, wherein the interlocking longitudinal guides for preventing rotation of the jack assembly within the opening includes a longitudinally extending key within the opening which engages a longitudinally extending key slot of the jack assembly.

7. The jack pair of claim 6, wherein the housing includes a pair of keys within the opening and the jack assembly includes a pair of key slots for engaging the keys.
8. The jack pair of claim 6, wherein the stop to limit the extent of insertion and prevent removal through the second end of the jack assembly includes a closed end within the key slot which engages an end of the key.
9. The jack pair of claim 5, wherein the ridge has a dovetail shape and the groove has a mating shape for slidably receiving the dovetail shape of the ridge.
10. The jack pair of claim 6, wherein the second connector end of each jack assembly is a BNC connector including a pair of opposing bayonets extending transversely from the connector and the opening includes a pair of bayonet slots for receiving the bayonets and orienting the key slot of the jack assembly with the key of the opening.
11. A coaxial connection assembly comprising:
  - a coaxial jack assembly with a conductive outer shell with a first end and a second opposite end, the first end defining a first coaxial jack including an insulator and a center conductor, the second end defining a second coaxial jack including an insulator and a center conductor, the center conductors of the first and second jacks electrically connected;
  - a non-conductive housing including a longitudinal opening, the jack assembly slidably received within the longitudinal opening with the first end of the jack assembly adjacent a first end of the housing and the second end of the jack assembly adjacent a second end of the housing;
  - means for preventing rotation of the jack assembly within the opening of the housing;
  - means for retaining the jack assembly within the opening of the housing, the retaining means permitting insertion of the jack assembly through the first end of the housing and preventing removal of the jack assembly through the second end of the housing;

the housing including a mounting flange extending away from the longitudinal opening adjacent the first end of the housing, the mounting flange including an opening for receiving a fastener.

12. The coaxial connection assembly of claim 11, wherein a captive fastener is positioned in the opening in the mounting flange.

13. The coaxial connection assembly of claim 12, wherein the fastener includes a screw.

14. The coaxial connection assembly of claim 11, wherein the means preventing rotation of the jack assembly within the longitudinal opening includes a first longitudinal guide within the opening and a mating first guide slot in the outer shell of the jack.

15. The coaxial connection assembly of claim 14, wherein the second end of the jack assembly includes a pair of opposing bayonets extending outward from the outer shell to a width greater than a width of the longitudinal opening, and the longitudinal opening of the housing including a pair of slots to permit the passage of the second end of the jack assembly through the longitudinal opening, and the first longitudinal guide within the longitudinal opening is positioned generally equidistant between the pair of slots within the longitudinal opening.

16. The coaxial connection assembly of claim 14, wherein the means for preventing rotation of the jack assembly includes a second guide opposite the first guide within the opening and the outer shell of the jack assembly includes a mating second guide slot opposite the first guide slot.

17. The coaxial connection assembly of claim 11, wherein the retaining means within the longitudinal opening includes a stop within the opening which engages a closed end of a mating slot in the outer shell of the jack, and the stop within the longitudinal opening is positioned generally equidistant between the pair of slots.

18. The coaxial connection assembly of claim 11, wherein the jack assembly includes means for selectively electrically terminate the center conductor of the front coaxial jack with outer shell.

19. The coaxial connection assembly of claim 18, wherein the center conductor of the front coaxial jack is electrically terminated to the outer shell as a normal condition and the electrical termination is broken by the insertion of a coaxial plug within the front coaxial jack.

20. The coaxial connection assembly of claim 19, wherein the means for selectively electrically connecting the center conductor of the front coaxial jack with the outer shell extends beyond the outer shell and the longitudinal opening of the housing is enlarged adjacent the first end of the housing to receive the means.

21. The coaxial connection assembly of claim 20, wherein the means for selectively electrically connecting the center conductor of the front coaxial jack with the outer shell includes a flexible conductive member in electrical contact with the center conductor when no plug is inserted within the front coaxial jack and a resistor electrically connecting the member to the outer shell.

22. The coaxial connection assembly of claim 11, wherein the housing includes a longitudinal ridge and a parallel longitudinal groove sized to receive the ridge extending from a face opposite the mounting flange, the ridge configured to be received in a groove of a second identical housing, when the housing is positioned with the first end and the face adjacent to a first end and a face of the second identical housing, respectively, so that the mounting flange of the housing extends opposite the mounting flange of the second identical housing.

23. The coaxial connection assembly of claim 22, wherein the ridges of the housing and the second identical housing have a dovetail shape and the grooves of the housing and the second identical housing have a cooperating shape to slidably receive the ridges.

24. A jack pair comprising:

- first and second jack assemblies, each jack assembly including a first coaxial connector end and a second coaxial connector end, each of the connector ends adapted to receive and electrically mate with a coaxial connector;

- first and second housings, each housing defining a longitudinal opening configured to position one of the jack assemblies within the opening with the first coaxial connector adjacent a first end of the housing and the second coaxial connector end adjacent a second end of the housing, the housings being identically configured;

- the opening of each housing slidably receiving one of the jack assemblies through the first end;

- means for preventing rotation of the jack assembly within the opening of each housing;

- means for retaining the jack assembly within the opening of each housing, the retaining means permitting insertion of the jack assembly through the first end of the housing into the opening and preventing removal of the jack assembly from the opening through the second end of the housing;

- each housing including an outer face including a longitudinal ridge and a longitudinal groove, the ridge and the groove of the first housing slidably received within the groove and ridge, respectively, of the second housing to releasably hold the outer faces of the first and second housings together;

- each of the housings including a mounting flange opposite the outer face adjacent the first end of each housing, the mounting flange including an opening for receiving a fastener.

25. The jack pair of claim 24, wherein the means for preventing rotation of the jack assembly within the opening includes a longitudinally extending key within the opening and a longitudinally extending key slot of the jack assembly.

26. The jack pair of claim 25, wherein the housing includes a pair of keys within the opening and the jack assembly includes a pair of key slots for engaging the keys.

27. The jack pair of claim 25, wherein the means to limit the extent of insertion and prevent removal through the second end of the jack assembly includes a stop within the key slot which engages an end of the key.

28. The jack pair of claim 24, wherein the ridge has a dovetail shape and the groove has a mating shape for slidably receiving the dovetail shape of the ridge.

29. The jack pair of claim 24, wherein the second connector end of each jack assembly is a BNC connector including a pair of opposing bayonets extending transversely from the connector and the opening includes a pair of bayonet slots for receiving the bayonets and orienting the key slot of the jack assembly with the key of the opening.

30. A method of assembling a jack pair comprising:

providing first and second coaxial jack assemblies, each jack assembly including a first coaxial connector end, a second coaxial connector end and a first guide in an outer shell of the jack assembly, and first and second housings, each housing including a longitudinal opening with a first end and a second end, the opening of each housing including a mating guide, each housing also including a first face including a ridge and a groove, the housings being identically configured;

inserting the second coaxial connector end of the first jack assembly into the opening of the first housing through the first end of the housing;

engaging the mating guide within the opening of the first housing with the first guide of the first jack assembly;

positioning the first jack assembly within the opening with the first connector end adjacent the first end of the first housing and the second connector end adjacent the second end of the first housing;

inserting the second coaxial connector end of the second jack assembly into the opening of the second housing through the first end of the housing;

engaging the mating guide within the opening of the second housing with the first guide of the second jack assembly;

positioning the second jack assembly within the opening with the first connector end adjacent the first end of the second housing and the second connector end adjacent the second end of the second housing;

slidably mounting the first housing to the second housing along the first face of each housing, the ridge and the groove of the first housing cooperating with the groove and ridge, respectively, of the second housing to hold the housing together.

31. The method of claim 30, wherein the second coaxial connector end of each jack assembly is a BNC connector including a pair of opposing bayonets extending transversely from the connector and the opening includes a pair of bayonet slots for receiving the bayonets, and further comprising positioning the bayonets of the second coaxial connector end within the bayonet slots and orienting the guide slot of the jack assembly with the guide of the opening.

32. The method of claim 30, wherein the housings each include a mounting flange extending opposite the first face with an opening holding a fastener, and further comprising positioning one of the first or second housing adjacent a panel with the first connector of the jack assembly extending through an opening in the panel; and,

fastening the housing to the panel by engaging a fastener opening of the panel with the fastener held by the mounting flange.

33. The method of claim 32, wherein the fastener held by the mounting flange is a captive fastener.

34. The method of claim 30, further comprising engaging a stop within the opening of the first housing to limit the extent of insertion of the first jack assembly.



35. The method of claim 34, wherein the stop within the first opening is engaged by a closed end of the first guide of the first jack assembly.

36. A jack pair comprising:

first and second jack assemblies, each jack assembly including a first coaxial connector end and a second coaxial connector end, each of the connector ends adapted to receive and electrically mate with a coaxial connector;

a housing defining a pair of longitudinal openings, each longitudinal opening configured to position one of the jack assemblies within the housing with the first coaxial connector adjacent a first end of the housing and the second coaxial connector end adjacent a second end of the housing, the housings being identically configured;

the openings of the housing slidably receiving one of the jack assemblies through the first end;

each opening of the housing including a first longitudinal guide and the jack assembly including a second longitudinal guide, the guides cooperating to prevent rotation of the jack assembly;

each opening of the housing including a stop to longitudinally limit sliding of the jack assembly within the opening through the first end of the housing and prevent removal of the jack assembly through the second end of the housing;

the housing including a pair of opposing mounting flange adjacent the first end of each housing, the mounting flange including an opening for receiving a fastener.